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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/561,557
Filing Date: December 19, 2005
Appellant(s): MONZON ET AL.

Theodore W. Olds
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 06/23/2009 appealing from the Office action mailed 07/02/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2002/0017434	ORRMAN ET AL.	2-2002
2002/0070080	NAKAGAKI ET AL.	6-2002
6,435,316	ANDO	8-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. **Claim(s) 1, 2, and 4-20** is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Orrman et al. U.S. Publication No. 2002/0017434 in view of Nakagaki et al. U.S. Publication No. 2002/0070080.
2. **Regarding claim 1**, Orrman et al. discloses an elevator comprising:
 3. an elevator car 2 movable along car guide rails 1;
 4. a counterweight 4 movable along counterweight guide rails 3;
 5. a bedplate, referred to as transverse support 17, supported by the car and counterweight guide rails; and
 6. a machine, referred to as drive motor 8, supported by the bedplate 17 and driving a tension member, referred to as rope 9, interconnecting the counterweight 4 and the car 2, opposed ends of the tension member 9 being connected at dead end hitches, referred to as first end 10 and second end 11, the bedplate 17 having a vertically lowermost surface, the dead end hitches 10, 11 associated with each of the opposed ends of tension member 9 being received on a bedplatet17 and such that they will be between the car 2 and a single wall 12 when the elevator is mounted within an elevator shaft.
7. Orrman et al. is silent concerning the dead end hitches extending above the vertically lowermost surface.
8. Nakagaki et al. teaches an elevator comprising:
 9. an elevator car, referred to as cage 20, movable along car guide rails 22, 23;

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10. a counterweight 30 movable along counterweight guide rails 31, 32;
11. a bedplate, referred to as connecting beam 33 supported by the car and counterweight guide rails 22, 31, 32; and
12. a machine, referred to as driving unit 40 supported by the bedplate 33 and driving a tension member, referred to as hoist cable 50, 60 interconnecting the counterweight 30 and the car 20, opposed ends of the tension member 50, 60 being connected at dead end hitches, referred to as anchoring ends 53, 57, 63, 67, the bedplate 33 having a vertically lowermost surface, shown in Figures 1-3, and the dead end hitches 53, 63 end extending above the vertical lowermost surface.
13. It would have been obvious to one of ordinary skill in the art at the time of the invention to extend the dead end hitches disclosed by Orrman et al. above the vertically lowermost surface as taught by Nakagaki et al. to facilitate the connection between the dead end hitch and the bedplate and protect the dead end hitch.
14. **Regarding claim 2**, Orrman et al. discloses the dead end hitches 10, 11 are mounted on the bedplate 17.
15. **Regarding claim 4**, Orrman et al. is silent concerning the bedplate is formed by a pair of C-shaped beams each having an internal space and at least one of the dead hitches is positioned within the internal space.
16. Nakagaki et al. teaches the bedplate 33 is formed by a pair of C-shaped beams, creating an I-beam shown in Figure 2, having an internal space and dead end hitches, referred to as anchoring ends 53, 63, positioned within the internal space, shown in Figure 2.

17. It would have been obvious to one of ordinary skill in the art at the time of the invention to form the bedplate disclosed by Orrman et al. by a pair of C-shaped beams each having an internal space and at least one of the dead hitches is positioned within the internal space as taught by Nakagaki et al. to protect the dead end hitch.

18. **Regarding claim 5, 15, and 17,** Orrman et al. discloses a bedplate 17 is supported by both of the car and counterweight guide rails 1, 3.

19. **Regarding claim 6,** Orrman et al. is silent concerning a plurality of the tension members and two sets of a corresponding plurality of dead end hitches, the dead end hitches of each of the two sets being aligned in an array that is generally parallel to a rotational axis of the machine.

20. Nakagaki et al. teaches a plurality of tension members, referred to as hoist cables 50, 60, and two sets of a corresponding plurality of dead end hitches, referred to as anchoring ends 53, 57, 63, 67, the dead end hitches.

21. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the elevator disclosed by Orrman et al. with a plurality of the tension members and two sets of a corresponding plurality of dead end hitches, the dead end hitches of each of the two sets being aligned in an array that is generally parallel to a rotational axis of the machine as taught by Nakagaki et al. to facilitate the lifting and support of the elevator car.

22. Furthermore, it would have been obvious to one of ordinary in the art at the time of the invention was made to provide a plurality of tension members and two sets of a corresponding plurality of dead end hitches, since it has been held that mere duplication

of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

23. **Regarding claim 7 and 12**, Orrman et al. discloses dead end hitches 10, 11 disposed on opposed lateral sides of the rotational axis of the machine 8.

24. **Regarding claim 8**, Orrman et al. discloses the machine 8 comprises a traction sheave 5 having a plurality of sheave surfaces, shown in Figures 2 and 3, for engaging and driving the tension member 9, and the dead end hitches 10, 11 are disposed within an axial distance defined by ends of the traction sheave 5.

25. Orrman et al. is silent concerning a plurality of tension members.

26. Nakagaki et al. teaches the machine 41 comprises a traction sheave 44, 45 having a plurality of sheave surfaces, shown as the surfaces of traction sheave 44, 45, for engaging and driving the plurality of tension members 50, 60, and the dead end hitches 53, 57, 63, 67 disposed within an axial distance defined by ends of the traction sheave 44, 45.

27. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the elevator disclosed by Orrman et al. with a plurality of tension members as taught by Nakagaki et al. to facilitate the lifting and support of the elevator car.

28. **Regarding claim 9**, Orrman et al. discloses wherein each of the sheave surfaces is aligned with a respective one of the dead end hitches 10, 11.

29. Orrman et al. is silent concerning wherein each of the sheave surfaces is aligned with a respective one of the dead end hitches in each of the sets of dead end hitches

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such that a line drawn through one of the sheave surfaces and its two associated dead end hitches is perpendicular to the rotational axis.

30. Nakagaki et al. teaches each of the sheave surfaces are aligned with a respective one of the dead end hitches 53, 57, 63, 67 in each of the sets of dead end hitches 53, 57, 63, 67 such that a line drawn through one of the sheave surfaces and its two associated dead end hitches 53, 57, 63, 67 is perpendicular to the rotational axis 42, 43.

31. It would have been obvious to one of ordinary skill in the art at the time of the invention to align the sheave surfaces disclosed by Orrman et al. with a respective one of the dead end hitches in each of the sets of dead end hitches such that a line drawn through one of the sheave surfaces and its two associated dead end hitches is perpendicular to the rotational axis as taught by Nakagaki et al. to reduce twisting of the tension member.

32. **Regarding claim 10**, Orrman et al. discloses the machine 8 comprises a traction sheave 5 having a plurality of sheave surfaces, shown in Figures 2 and 3, for engaging and driving the tension member 9, wherein each of the sheave surfaces are aligned with a respective dead end hitch 10, 11.

33. Orrman et al. is silent concerning a plurality of tension member, wherein each of the sheave surfaces are aligned with a respective pair of the dead end hitches such that a line drawn through one of the sheave surfaces and its two associated dead end hitches is perpendicular to a rotational axis of the traction sheave.

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34. Nakagaki et al. teaches the machine comprises a traction sheave 44, 45 having a plurality of sheave surfaces for engaging and driving a plurality of tension members 50, 60, wherein each of the sheave surfaces are aligned with a respective pair of the dead end hitches 53, 57, 63, 67 such that line drawn through one of the sheave surfaces and its two associated dead end hitches 53, 57, 63, 67 are perpendicular to a rotational axis 42, 43 of the traction sheave 44, 45.

35. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the elevator disclosed by Orrman et al. with a plurality of tension members as taught by Nakagaki et al. to facilitate the lifting and support of the elevator car.

36. It would have been obvious to one of ordinary skill in the art at the time of the invention to align the sheave surfaces disclosed by Orrman et al. with a respective one of the dead end hitches in each of the sets of dead end hitches such that a line drawn through one of the sheave surfaces and its two associated dead end hitches is perpendicular to the rotational axis as taught by Nakagaki et al. to reduce twisting of the tension member.

37. **Regarding claim 11**, Orrman et al. discloses an elevator comprising:

38. an elevator car 2 movable along car guide rails 1;
39. a counterweight 4 movable along counterweight guide rails 3;
40. a bedplate, referred to as transverse support 17, supported by the car and counterweight guide rails; and

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41. a machine, referred to as drive motor 8, supported by the bedplate 17 and driving a tension member, referred to as rope 9, interconnecting the counterweight 4 and the car 2, opposed ends of the tension member 9 being connected at dead end hitches, referred to as first end 10 and second end 11, the bedplate 17 having a vertically lowermost surface, the dead end hitches 10, 11, the dead end hitches 10, 11 associated with each of the opposed ends of tension member 9 being received on the bedplate 17 and such that they will be between the car 2 and a single wall 12 when the elevator is mounted within an elevator shaft.

42. Orrman et al. is silent concerning a plurality of tension members, and there being two sets of aligned dead end hitches, each set of dead end hitches being supported by the bedplate in an array that is generally parallel to a rotational axis of the machine.

43. Nakagaki et al. teaches an elevator comprising:

44. an elevator car 20 movable along car guide rails 22, 23;

45. a counterweight 30 movable along counterweight guide rails 31, 32;

46. a bedplate 33 supported by the car and counterweight guide rails 22, 31, 32; and

47. a machine 40 supported by the bedplate 33 and driving a plurality of tension members 50, 60 interconnecting a counterweight 30 to a car 20, opposed ends of the tension members 50, 60 being connected at dead end hitches 53, 57, 63, 67, there being two sets of aligned dead hitches 53, 57, 63, 67, each set of dead hitches 53, 57, 63, 67 in an array that is generally parallel to a rotational axis 42, 43 of a machine 41.

48. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the elevator disclosed by Orrman et al. with a plurality of tension

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members and two sets of aligned dead end hitches, each set of dead end hitches being supported by the bedplate in an array that is generally parallel to a rotational axis of the machine as taught by Nakagaki et al. to facilitate the lifting and support of the elevator car.

49. **Regarding claim 13**, Orrman et al. discloses the machine 8 comprises a traction sheave 5 having a plurality sheave surfaces, shown in Figures 2 and 3, for engaging and driving the tension member 9 and the dead end hitches 10, 11 are disposed within an axial distance defined by the ends of the traction sheave 5.

50. Orrman et al. is silent concerning a plurality of tension members.

51. Nakagaki et al. the machine 40 comprises a traction sheave having a plurality of sheave surfaces for engaging and driving the plurality of tension members 50, 60, and the dead end hitches 53, 57, 63, 67 are disposed within an axial distance defined by ends of the traction sheave 44, 45.

52. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the elevator disclosed by Orrman et al. with a plurality of tension members as taught by Nakagaki et al. to facilitate the lifting and support of the elevator car.

53. **Regarding claim 18-20**, Orrman et al. discloses a dead end hitch 10 associated with one of the opposed ends of the tension member 9 being on a first side of a rotational axis of the traction sheave 5, and a dead end hitch 11 associated with the other of the opposed ends of the tension member 9 being on an opposed side of the rotational axis of the traction sheave 5.

54. **Regarding claim 14,** Orrman et al. discloses wherein each of the sheave surfaces are aligned with a respective one of the dead end hitch 10, 11.

55. Orrman et al. is silent concerning sets of dead end hitches such that a line drawn through one of the sheave surfaces and its two associated dead end hitches is perpendicular to the rotational axis.

56. Nakagaki et al. teaches wherein each of the sheave surfaces are aligned with a respective one of the dead end hitch 53, 57, 63, 67 in each of the sets of dead end hitches 53, 57, 63, 67 such that a line drawn through one of the sheave surfaces and its two associated dead end hitches 53, 57, 63, 67 is perpendicular to the rotational axis 42, 43.

57. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the elevator disclosed by Orrman et al. with sets of dead end hitches such that a line drawn through one of the sheave surfaces and its two associated dead end hitches is perpendicular to the rotational axis as taught by Nakagaki et al. to reduce twisting of the tension member.

58. **Regarding claim 16,** Orrman et al. discloses an elevator comprising:

59. an elevator car 2 movable along car guide rails 1;

60. a counterweight 4 movable along counterweight guide rails 3;

61. a bedplate, referred to as transverse support 17, supported by the car and counterweight guide rails; and

62. a machine, referred to as drive motor 8, supported by the bedplate 17 and comprising a traction shave 5 for engaging and driving a tension member 9

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interconnecting the counterweight 4 to the car 2, opposed ends of the tension member 9 connected via dead end hitches 10, 11 to the bedplate 17,

63. the traction sheave 5 having a plurality of sheave surfaces, shown in Figures 2 and 3, corresponding to the tension member 9, wherein each of the sheave surfaces is axially aligned with the respective dead end hitches 10, 11, the dead end hitches 10, 11 associated with each of the opposed ends of the tension member 9 being received on the bedplate 17 and such that they will be between the car 2 and a single wall when the elevator is mounted within an elevator shaft.

64. Orrman et al. is silent concerning a plurality of tension members, wherein each of the sheave surfaces is axially aligned with a respective pair of the dead end hitches such that a line drawn through one of the sheave surfaces and its two associated dead end hitches is perpendicular to a rotational axis of the traction sheave.

65. Nakagaki et al. teaches an elevator comprising:

- 66. an elevator car 20 movable along car guide rails 22, 23;
- 67. a counterweight 30 movable along counterweight guide rails 31, 32;
- 68. a bedplate 33 supported by the car and counterweight guide rails 22, 31, 32; and
- 69. a machine 40 supported by the bedplate 33 comprising a traction sheave 44, 45 for engaging and driving a plurality of tension members 50, 60 interconnecting the counterweight 30 to the car 20, opposed ends of the tension members 50, 60 being connected via dead end hitches 53, 57, 63, 67 to the bedplate 33,
- 70. the traction sheave 44, 45 having a plurality of sheave surfaces corresponding to the plurality of tension members 50, 60, wherein each of the sheave surfaces are axially

aligned with a respective pair of the dead hitches 53, 57, 63, 67 such that a line drawn through one of the sheave surfaces and its two associated dead end hitches 53, 57, 63, 67 are perpendicular to a rotational axis 42, 43 of the traction sheave 44, 45.

71. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the elevator disclosed by Orrman et al. with a plurality of tension members as taught by Nakagaki et al. to facilitate the lifting and support of the elevator car.

72. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the elevator disclosed by Orrman et al. with sets of dead end hitches such that a line drawn though one of the sheave surfaces and its two associated dead end hitches is perpendicular to the rotational axis as taught by Nakagaki et al. to reduce twisting of the tension member.

73. **Claim(s) 3 and 21** is/are rejected under 35 U.S.C. 103(a) as being unpatentable Orrman et al. U.S. Publication No. 2002/0017434 over in view of Nakagaki et al. U.S. Publication No. 2002/0070080 as claimed in claim 2 and further in view of Ando U.S. Patent No. 6435316.

74. **Regarding claim 3 and 21**, Orrman et al. discloses the bedplate 17 is formed by at least one beam and the dead end hitches 10, 11 are supported by a vertical portion of the beam 17.

75. Orrman et al. is silent concerning the dead end hitches are supported by a vertical uppermost portion of the beam.

76. Ando teaches a bedplate, referred to as rope end fixing member 37, is formed by at least one beam, and the dead end hitches, referred to as fastening member 19, are supported by a vertical uppermost portion of the beam 37, shown in Figure 3.

77. It would have been obvious to one of ordinary skill in the art at the time of the invention to support the dead end hitches disclosed by Orrman et al. by a vertical uppermost portion of the beam as taught by Ando to facilitate the connection between the bedplate and the dead end hitches.

(10) Response to Argument

78. Applicant's arguments filed 06/23/2009 have been fully considered but they are not persuasive.

79. In response to applicant's argument that "the dead end hitches 57 and 67 are not positioned on the bedplate at all, but are on the remote side of the car from the bedplate. The dead end hitches 57 and 67 are mounted to the underside of an element 25 which is connected to a brace 24, which thus places the dead end hitches 57 and 67 on the opposed side of the car" although dead end hitches 57 and 67 are not positioned on the bedplate one of ordinary skill in the art at the time of the invention would not be limited to viewing dead end hitches 57 and 67 exclusively. Nakagaki et al. also teaches the claimed subject matter, dead end hitches 63 and 64 extending above a vertically lowermost surface. One of ordinary skill in the art at the time of the invention would view this connection, as taught by Nakagaki et al., between the dead end hitches 63 and 64 and the lowermost surface of the bedplate 33 and be motivated to use that connection as taught by Nakagaki et al. between the dead end hitches 10 and 11 and the bedplate

17 disclosed by Orrman et al. which provides would facilitate the connection between the dead end hitch and the bedplate and protect the dead end hitch.

80. In response to applicant's argument that there is nothing in the prior art to suggest combining Orrman et al. U.S. Publication No. 2002/0017434 over in view of Nakagaki et al. U.S. Publication No. 2002/0070080. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Firstly, it should be noted that there is no requirement that an express, written suggestion to combine must appear in prior art references before a finding of obviousness. In addition to the teachings of the references themselves, the suggestion to combine references may be found in the nature of the problem to be solved or the knowledge of persons of ordinary skill in the art. Furthermore, while there must be a motivation to make the claimed invention, there is no requirement that the prior art provide the same reason as the applicant to make the claimed invention. In this case, the suggestion to combine Orrman et al. in view of Nakagaki et al. comes from the knowledge of persons of ordinary skill in the art that extending the dead end hitches above a vertically lowermost surface would facilitate the connection between the dead end hitch and the bedplate and protect the dead end hitch.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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/John Q. Nguyen/

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